

CLAIMS

1. A method for analyzing an object comprising:
prescanning the object using a multiple energy X-ray device to determine
5 information indicative of effective atomic number characteristics of the object; and
conducting scans of areas of interest of the object with a computed tomography
device based upon the information.
2. The method of claim 1 further comprising transmitting the information to a
10 processor coupled to the computed tomography device.
3. The method of claim 2, further comprising:
performing a metal artifact correction based on the information.
- 15 4. The method of claim 3, wherein performing a metal artifact correction
includes performing a beam hardening correction.
5. The method of claim 3, wherein performing a metal artifact correction
includes performing a scatter correction.
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6. The method of claim 1, further comprising:
using the information to determine density characteristics of the object.
7. The method of claim 1, further comprising:
25 using the information to determine a plane of the object to be scanned.
8. A method for analyzing an object comprising:
prescanning the item using a multiple energy X-ray device to determine prescan
information;
30 transmitting the prescan information to a processor coupled to a computed
tomography device;

performing a computed tomography scan of a plane of the object based on the prescan information; and

performing a metal artifact correction on the computed tomography scan based on the prescan information if the plane intersects an area including or near a metal object.

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9. The method of claim 8, wherein the processor is located within the computed tomography device.

10. An apparatus for analyzing an object comprising:
10 a multiple energy prescanner that prescans the object; and
a computed tomography device that scans only areas of interest of the object based on information determined in the prescan .

11. The apparatus of claim 10, wherein the multiple energy prescanner has a
15 high energy X-ray source and a low energy X-ray source.

12. The apparatus of claim 10, further comprising a conveyor for transporting the item from the multiple energy prescanner to the computed tomography device.

13. The apparatus of claim 10, wherein the computed tomography device is a
20 multiple energy computed tomography device.

14. An apparatus for analyzing an object comprising:
a multiple energy prescanner; and
25 a computed tomography device;
wherein information indicative of at least one metal artifact is transmitted from the multiple energy prescanner to the computed tomography device.